

IN THE CLAIMS:

1. (Currently amended) A method of multicasting a data packet in a system area network, comprising:
 - receiving the data packet, wherein the data packet includes an identifier of a multicast group;
 - identifying a plurality of queue pairs that are members of the ~~multicast~~ multicast group;
 - and
 - delivering the data packet to each of the plurality of queue pairs that are members of the multicast group.
2. (Currently amended) The method of claim 1, wherein the data packet is received in a channel adapter of an end node, the end node being a final destination for the data packet within the system area network.
3. (Currently amended) The method of claim 2, 1, wherein the data packet is received in a channel adapter of an end node, wherein the data packet originates from the end node, and wherein delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes replicating the data packet for each of the plurality of queue pairs that are internal to the end node.
4. (Original) The method of claim 1, further comprising:
 - decoding the data packet; and
 - storing the data packet in a multicast packet buffer.
5. (Original) The method of claim 4, wherein decoding the data packet and storing the data packet in the multicast packet buffer are performed by port logic.
6. (Original) The method of claim 4, wherein decoding the data packet and storing the data packet in the multicast packet buffer are performed by channel adapter logic.

7. (Currently amended) The method of claim 1, wherein each of the plurality of queue pairs comprises a send queue and a receive queue, and wherein identifying the plurality of queue pairs includes determining which queue pairs are associated with a destination local identifier in the data packet.

8. (Original) The method of claim 7, wherein determining which queue pairs are associated with the destination local identifier includes using a destination local identifier to queue pair lookup table.

9. (Original) The method of claim 8, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier.

10. (Original) The method of claim 8, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier.

11. (Original) The method of claim 10, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to another entry in the destination local identifier to queue pair lookup table.

12. (Currently amended) A computer program product in a computer readable medium for multicasting a data packet in a system area network, comprising:

first instructions for receiving the data packet, wherein the data packet includes an identifier of a multicast group;

second instructions for identifying a plurality of queue pairs that are members of the ~~multicast~~ multicast group; and

third instructions for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group.

13. (Currently amended) The computer program product of claim 12, wherein the data packet is received in a channel adapter of an end node, the end node being a final destination for the data packet within the system area network.

14. (Currently amended) The computer program product of claim ~~13~~, 12, wherein the data packet is received in a channel adapter of an end node, wherein the data packet originates from the end node, and wherein the third instructions for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group include instructions for replicating the data packet for each of the plurality of queue pairs that are internal to the end node.

15. (Original) The computer program product of claim 12, further comprising:
fourth instructions for decoding the data packet; and
fifth instructions for storing the data packet in a multicast packet buffer.

16. (Original) The computer program product of claim 15, wherein the fourth instructions for decoding the data packet and the fifth instructions for storing the data packet in the multicast packet buffer are executed by port logic.

17. (Original) The computer program product of claim 15, wherein the fourth instructions for decoding the data packet and the fifth instructions for storing the data packet in the multicast packet buffer are executed by channel adapter logic.

18. (Currently amended) The computer program product of claim 12, wherein each of the plurality of queue pairs comprises a send queue and a receive queue, and wherein the second instructions for identifying the plurality of queue pairs include instructions for determining which queue pairs are associated with a destination local identifier in the data packet.

19. (Original) The computer program product of claim 18, wherein the instructions for determining which queue pairs are associated with the destination local identifier include instructions for using a destination local identifier to queue pair lookup table.

20. (Original) The computer program product of claim 19, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier.

21. (Original) The computer program product of claim 19, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier.

22. (Original) The computer program product of claim 21, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to another entry in the destination local identifier to queue pair lookup table.

23. (Currently amended) An apparatus for multicasting a data packet in a system area network, comprising:

means for receiving the data packet, wherein the data packet includes an identifier of a multicast group;

means for identifying a plurality of queue pairs that are members of the ~~multicast~~ multicast group; and

means for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group.

24. (Currently amended) The apparatus of claim 23, wherein the data packet is received in a channel adapter of an end node, the end node being a final destination for the data packet within the system area network.

25. (Currently amended) The apparatus of claim 24, 23, wherein the data packet is received in a channel adapter of an end node, wherein the data packet originates from the end node, and wherein the means for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes means for replicating the data packet for each of the plurality of queue pairs that are internal to the end node.

26. (Original) The apparatus of claim 23, further comprising:
means for decoding the data packet; and
means for storing the data packet in a multicast packet buffer.
27. (Original) The apparatus of claim 26, wherein the means for decoding the data packet and means for storing the data packet in the multicast packet buffer are include port logic.
28. (Original) The apparatus of claim 26, wherein the means for decoding the data packet and means for storing the data packet in the multicast packet buffer include channel adapter logic.
29. (Currently amended) The apparatus of claim 23, wherein each of the plurality of queue pairs comprises a send queue and a receive queue, and wherein the means for identifying the plurality of queue pairs includes means for determining which queue pairs are associated with a destination local identifier in the data packet.
30. (Original) The apparatus of claim 29, wherein the means for determining which queue pairs are associated with the destination local identifier includes means for using a destination local identifier to queue pair lookup table.
31. (Original) The apparatus of claim 30, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier.
32. (Original) The apparatus of claim 30, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier.
33. (Original) The apparatus of claim 32, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to another entry in the destination local identifier to queue pair lookup table.

34. (Original) The method of claim 1, wherein receiving the data packet includes:
determining if there is an error in receipt of the data packet; and
if there is an error in receipt of the data packet, dropping the data packet.
35. (Original) The method of claim 1, wherein delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes:
determining if there is an error in delivering the data packet to each of the plurality of queue pairs; and
dropping the data packet if an error occurs during delivery of the data packet to each of the plurality of queue pairs.